

FEDERAL AVIATION ADMINISTRATION
RECORD OF APPROVAL
FAR PART 150 NOISE COMPATIBILITY PROGRAM UPDATE/REVISED FIVE-YEAR FORECAST
LEHIGH VALLEY INTERNATIONAL AIRPORT
ALLENTOWN, PENNSYLVANIA

_____ Assistant Administrator for Aviation Policy, Planning and Environment, AEP-1	_____ Date	_____ CONCUR	_____ NONCONCUR
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_____ Chief Counsel, AGC-1	_____ Date	_____ CONCUR	_____ NONCONCUR
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_____ Associate Administrator for Airports, ARP-1	_____ Date	_____ APPROVED	_____ DISAPPROVED
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**RECORD OF APPROVAL
LEHIGH VALLEY INTERNATIONAL AIRPORT
NOISE COMPATIBILITY PROGRAM UPDATE/REVISED FIVE-YEAR FORECAST**

INTRODUCTION

The Lehigh Valley International Airport, Allentown, Pennsylvania, Noise Compatibility Program (NCP) Update describes the current and future noncompatible land uses based upon the parameters established in Federal Aviation Regulation (FAR) Part 150, *Airport Noise Compatibility Planning*. This NCP is to replace the NCP approved by the FAA on November 10, 1992. The program recommends a total of twenty measures to prevent the introduction of additional noncompatible land uses and to reduce the effect of the noise generated at the airport. The recommendations include six noise abatement measures, five compatible land use measures, and nine implementation program measures. Fifteen measures are, in whole or in part, continuations of existing policies previously approved under Part 150. The recommended program measures are summarized on Pages 99 through 106 of the NCP.

The measures are identified below by program element and referenced to the NCP Update by page number. Each element summarizes as closely as possible the airport operator's recommendations as found in the NCP Update. The statements contained within the summarized recommendations and before the indicated FAA approval, disapproval, or other determinations do not represent the opinions or decisions of the FAA.

The approvals listed herein include approvals of actions that the Lehigh-Northampton Airport Authority (LNAA) recommends be taken by the FAA. It should be noted that these approvals indicate only that the actions would, if implemented, be consistent with the purposes of Part 150. These approvals do not constitute decisions to implement the actions. These approvals do not constitute a commitment by the FAA to provide federal financial assistance for these projects. Later decisions concerning possible implementation of the actions may be subject to applicable environmental or other procedures or requirements.

We have evaluated the recommendation in LNAA's Part 150 Update to continue and amend the preferential runway use program and other recommended noise abatement measures that the FAA is responsible for implementing in this NCP. We have determined, among other things, that these measures do not, and are not anticipated to, create an undue burden on interstate or foreign commerce, nor do the measures adversely affect any other powers or responsibilities of the Administrator prescribed by law.

1 - NOISE ABATEMENT ELEMENT

1. Amend night (10 P.M.-7 A.M.) preferential use of Runway 31, otherwise alternating departure use of Runways 6 and 24 on odd and even days. (Page 99)

Description: This measure recommends an amendment to the existing FAA-approved voluntary NCP measure related to assignment of corporate jet departures to Runway 31 when the airport is in Runway 24 operation. This measure would extend the assignment of Runway 31 for departures to apply to all departures at night, regardless of aircraft type, and incorporate the

existing voluntary noise abatement measure whereby operators are requested to depart on Runway 6 on odd days and on Runway 24 on even days (between 9:30 p.m. and 6:30 a.m.).

FAA Action: APPROVED as a voluntary measure.

2. Amend Runway 31 preferred departure turn to magnetic north. (Page 99)

Description: This measure recommends an amendment to the existing FAA-approved voluntary NCP measure which calls for the ATCT to assign Runway 31 departures a turn to a 360 degree heading *as soon as practical*.

The updated recommendation clarifies the existing measure by requesting that aircraft *maintain that heading until reaching an altitude* of 3,000 feet above mean sea level (MSL), which is approximately 2,600 feet above airport elevation (AAE). Table 6 at page 49 states benefits to about 321 persons versus the baseline 2008 conditions.

FAA Action: APPROVED in part, as voluntary; DISAPPROVED in part. The FAA *approves the noise abatement heading until reaching an altitude of 2,000 feet MSL. The FAA disapproves the 3,000-foot MSL as the level at which the aircraft may depart this heading. Higher altitudes will cause departures to be mixed in with other nearby airport traffic. The current altitude of 2,000 feet MSL that is used by ATCT staff is upheld.*

Subsequent discussions with the airport sponsor and its consultant indicate that the current altitude of 2,000 feet MSL was modeled in the NEMs (pages 33, 36, 37, 50), and that it was not the intent of the measure to change current ATCT established noise abatement turn altitude, but only to improve compliance with magnetic 360°.

3. Continue reduction of military training activity. (Page 100)

Description: This measure recommends that the LNAA continue the FAA-approved measure to reduce military training activity through voluntary arrangements. Current military activity is approximately 42% less than in 1989, nearly accomplishing the 50% reduction goal established in the previous study. This reduced level of military activity is incorporated in all DNL contour cases.

FAA Action: APPROVED as a voluntary measure.

4. Continue to address aircraft ground noise: Conduct engine maintenance runup activity at designated locations and close gap in noise wall between Hangars 2 and 3. (Pages 78, 100)

Description: This measure recommends that LNAA continue the FAA-approved measure whereby the ATCT directs operators to one of two approved runup sites: the cargo apron and the Runway 31 hold bay. The measure is expanded to include construction of a section of noise barrier to close a gap between the two hangars abutting the ramp. The gap degrades the existing walls' performance, and the residents of Saylor's Mobile Home Park on the south side of Airport Road, across from the ramp, would be the primary beneficiaries. The park residents are not eligible for sound attenuation, and this would be

a cost-effective means of mitigating this noise source. The location of the park is depicted on several graphics contained in the NCP.

FAA Action: APPROVED. The two existing runup locations are sited away from noise-sensitive land uses. To be eligible for Federal financial assistance, the noise wall must provide a minimum 5-decibel reduction in noise to the nearest noise-sensitive receptor (in this case, the mobile homes).

5. Continue to install full instrument landing system (ILS) on Runway 24 for arrivals from the northeast. (Pages 36, 78, 100; sponsor supplemental information via 8/2/05 e-mail)

Description: This measure recommends that FAA continue the installation of three ILS elements on Runway 24 - a localizer, a glide slope, and distance measuring equipment (DME), and add an approach light system to the ILS. The approach light system would enhance the effectiveness of the ILS. The ILS will provide aircraft with vertical guidance along a continuously descending "glide path" rather than leveling off as they approach the airport to obtain visual observation of the runway.

FAA Action: DISAPPROVED for purposes of Part 150 pending submission of additional information to make an informed analysis. The NCP is not recommending approval of a localizer, glide slope and DME under Part 150. These elements have already been approved as F&E projects, and should be commissioned by October 1, 2005. Rather, this noise abatement measure is aimed at enhancing the to-be-commissioned ILS through the installation of approach lighting, which was not included in the existing airport development project. Without this lighting, Air Traffic service's ability to accomplish noise mitigating runway rotation will be impacted. This is because visibility minima will not be equal to Runway 6 ILS lighting, making that runway preferred during lower visibility conditions. The lighting will eliminate the back course approach, which the airport sponsor states is a source of major noise complaints. This will make arrivals less noisy over Hanover Township-Northampton County.

While the description of the purpose of this measure implies a noise benefit, the NCP does not provide one. Nor does it indicate whether new noise-sensitive land uses will be impacted in a "tradeoff" of noise. This disapproval under Part 150 does not prohibit the airport sponsor from seeking installation of approach lighting under other available programs. Supplemental information about the noise benefits may qualify the measure for approval under Part 150.

6. Require pilots to use close-in noise abatement departure profile (NADP) procedures when operationally safe and feasible. (Page 101)

Description: This measure recommends pilots follow procedures that are consistent with FAA guidelines in AC 91-53A, to ensure that the procedures are operationally feasible. The measure was modeled for benefits on a single event basis; the results and a discussion of the procedure are found at section 3.7 of the NCP.

FAA Action: APPROVED as a voluntary measure.

2 - LAND USE ELEMENT

1. Establish property acquisition program. (Page 101)

Description: This measure recommends a mandatory and voluntary land acquisition program, in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Act (49 CFR Part 24), to remove incompatible land uses from within the 70 and 75 dB DNL contours.

The *Mandatory Property Acquisition* would apply to:

- Any residential property located within the 2008 five year forecast condition 75 dB DNL or greater noise contour.
- Any residential property located within the 2008 five year forecast condition 70 to 75 dB DNL contour interval and within the RPZ limits.

The *Voluntary Property Acquisition* would apply to any residential property located within the 2008 five year forecast condition 70 to 75 dB DNL contour interval and *outside* the RPZ limits. Property owners are under no obligation to participate and may remain in their homes.

FAA Action: APPROVED. The Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act must be followed if Federal funding will be requested.

2. Continue sound insulation program - noise sensitive and public use facilities. (Pages 87, 102, sponsor supplemental information via e-mail 8/2/05)

Description: This measure recommends the continuance of the LNAA voluntary sound insulation program of noise sensitive and public use facilities. The LNAA intends to implement a second phase of sound insulation at the Christ Evangelical Lutheran Church in Hanover Township, Lehigh County and St. John's Evangelical Lutheran Church in Whitehall Township in order to complete treatment of all noise-sensitive areas within the facilities (based on Part 150 guidelines). There are five other noise-sensitive public facilities potentially exposed to incompatible levels of noise, as defined by the various NEM contours: Hindu Temple Society located in Hanover Township, Northampton County; United Church of Christ, Hanover Township, Northampton County; Magical Tot Spot - a day care facility located in Whitehall Township; Information Computer Systems Institute located in Hanover Township, Lehigh County; and Hanover Municipal Building located in Hanover Township, Lehigh County (sensitive uses include meeting facilities and administration offices). Specific project eligibility will depend on which 2008 five-year forecast condition NEM applies at the conclusion of FAA review and approval of NCP elements. St. John's United Church of Christ is 500 feet from the year 2008 with runway modifications DNL 65 dB contour, essentially at the DNL 65 dB noise contour level. It is located within the DNL 65 dB for the 2008 without runway modifications. It is used as a day care during the week,

and is recommended this facility be included in the NCP sound insulation program.

As a condition of participation in this program, the LNAA would require the property owners to grant an avigation easement granting the LNAA the right to operate aircraft in the area, with all effects of aircraft operations and without bringing legal suit against the airport in the future. The easement becomes a permanent description in the property deed.

FAA Action: APPROVED.

3. Continue sound insulation program - residential uses. (Page 102)

Description: This measure recommends the continuation of LNAA's voluntary residential sound insulation program to all eligible homes within the 65 dB DNL for the five-year forecast condition NEM, based on the specific contour that applies at the conclusion of FAA review and approval of NCP elements. However, any residential property previously sound insulated or constructed on or after October 1, 1998, would not be eligible¹. While there is no cost to participants, homeowners that voluntarily participate would be required to grant an avigation easement to the LNAA giving it the right to operate aircraft in the area, with all effects of aircraft operations and restricts the property owner from bringing a legal suit against the airport in the future. LNAA has completed treatment of approximately 300 residences, and initiated treatment of another 100 in FY 2005 (page 88).

FAA Action: APPROVED.

4. Establish sales assistance program. (Pages 89, 103)

Description: This measure recommends the establishment of a voluntary sales Assistance program as an alternative to the sound insulation program for homeowners who would prefer to move to a new location outside the 65 dB DNL contour. The following parameters would be in effect for this measure:

- The residence must be located within the five-year forecast conditions NEM 65 dB DNL contour (the contour that applies at the conclusion of the FAA review and approval of NEM elements).
- The LNAA would assist by paying the real estate sales commission, moving costs within 50 miles, and closing costs on a new home.
- Property owners whose homes were treated under a previous sound insulation program would be eligible if they sign up for the program within one year of NCP approval.
- An avigation easement would be placed on the deed of the property at the time of sale unless one was previously acquired through the sound insulation program.

FAA Action: Approved.

¹ The FAA's policy published in the Federal Register April 3, 1998 (Volume 63, Number 64), states that the FAA will not approve Federal funding to mitigate noise-sensitive land uses constructed after October 1, 1998.

5. Establish airport noise overlay district. (Page 103)

Description: This measure recommends establishing an Airport Noise Overlay District to assist the local jurisdictions in setting standards to protect the public and make them aware of the noise effects generated from the airport. Its intent is to prevent the introduction of new non-compatible land uses to the maximum feasible extent, in areas subject to the highest levels of aircraft noise exposure. Regulations in noise zones can prohibit noise-sensitive uses as long as the underlying zone permits enough other land uses to provide for economically viable use of the land. The regulations could also require that sound insulation be required in the construction of noise sensitive land uses. The boundaries of each zone would be incorporated and shown on each municipality's official zoning map to be effective.

FAA Action: APPROVED. The Federal government has no authority to control local land use; the local government has the authority to implement this measure.

FAA's policy is that new noise sensitive land uses should be prevented from developing around airports or, in cases where prevention is not feasible, they should be rendered compatible with noise exposure levels through measures such as sound insulation during construction. While the FAA prefers no new noise-sensitive development, in cases where the airport sponsor does not control land uses, sound attenuation for new construction would provide compatibility with the airport. Part 150 provides that, where the community determines that residential or school uses must be allowed in the 65 DNL db contour, measures to achieve outdoor to indoor noise level reductions (NLR) of at least 25 dB and 30 dB should be incorporated into building codes. 14 C.F.R. Part 150, Table 1.

3 - IMPLEMENTATION PROGRAM ELEMENTS

1. Continue on-airfield signage. (Page 104)

Description: This measure states LNAA will continuously monitor signage requirement. It has already installed signs on the airport requesting pilot compliance with noise abatement procedures. The LNAA will evaluate their effectiveness and request FAA approval if any updates are identified (page 95). No specific changes are identified at this time.

FAA Action: APPROVED. LNAA will monitor the success of existing signage. Signs and other publications must not construe the procedure as mandatory for noise abatement purposes.

2. Continue coordination with ATCT on verbal advisories. (Page 104)

Description: This measure recommends that the LNAA continue its practice of Meeting regularly with ATCT representatives on issues related to safe and efficient implementation of noise abatement elements of the NCP, including verbal advisories on tower band radio communications, where possible.

FAA Action: APPROVED. LNAA will maintain open communications with ATCT about its noise abatement program.

3. Continue noise abatement letter to airmen. (Page 104)

Description: This measure recommends maintaining an up-to-date letter to Airmen based on the updated NCP as approved by the FAA in this ROA.

FAA Action: APPROVED. Signs and other publications must not construe procedures as mandatory for noise abatement purposes.

4. Revise noise abatement pilot manual insert. (Page 105)

Description: This measure recommends that the LNAA prepare and distribute a revised pilot noise abatement handout in a format that is compatible with a Jeppesen manual, following receipt of the FAA's ROA for this revised NCP.

FAA Action: APPROVED. Signs and other publications must not construe the procedure as mandatory for noise abatement purposes.

5. Continue sound insulation program web site. (Page 105)

Description: This measure recommends that the LNAA continue the operation of a web site that is used to advise interested residents of the residential sound insulation program.

FAA Action: APPROVED.

6. Continue permanent monitoring system. (Page 105)

Description: This measure recommends the continuation of the permanent monitoring system operation and use. The LNAA has installed a permanent system as approved by the FAA in the original NCP. The system includes six permanent monitors, one portable monitor, components to collect information on flight tracks altitudes, runways used, and other factors, and computer software and hardware to store, evaluate, and report on the data. The LNAA has directed the monitoring system vendor to prepare automated reports that will track the implementation of key program elements (Appendix D). The LNAA will continue operating and support of this system, and request FAA assistance for upgrades as necessary and appropriate to address changing conditions.

FAA Action: APPROVED. It is noted the NCP is not requesting upgrades at this time. For reasons of aviation safety, this approval does not extend to use of the monitoring equipment for enforcement purposes by in situ measurement of any present noise threshold.

7. Reestablish and continue the noise abatement advisory committee (Page 106)

Description: Establish and continue meetings of the Noise Abatement Advisory Committee (Appendix E). The committee will identify community concerns about

aircraft noise, formulate possible mitigation alternatives, evaluate these alternatives and reach consensus, monitor action items listed in the approved NCP, and develop consensus recommendations for an NCP update.

FAA Action: APPROVED.

8. Continue noise compatibility program staff. (Page 106)

Description: This measure recommends the continuation of staff as appropriate for all noise-related functions. The residential sound insulation program office includes two full-time staff; other noise compatibility related duties are distributed among several LNAA staff. This exceeds the single position proposed in the original NCP. Advisory group members suggested LNAA should consider hiring an additional full-time noise abatement officer. However, LNAA believes the resources to carry out the residential insulation program have a higher priority.

FAA Action: APPROVED.

9. Review and revise NEM/NCP. (Page 106)

Description: This measure recommends the review and revision of the NEM and NCP as appropriate. LNAA will use information from a variety of sources to monitor NEM accuracy and NCP effectiveness. LNAA will use this and other available information to identify the need for updates or revisions to the NEM or NCP. As discussed in section 2.3, consistent with Part 150 section 150.21(d), the LNAA will submit revised NEMs as necessary, and will update the NCP if made necessary by NEM revisions per 150.23(e)(9).

FAA Action: APPROVED.

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